What is claimed is:

1. A transmission apparatus for constant bit rate data cells, which is adapted to transmit data cells of data packets in sequence to a network, comprising:

a controller which prevents head data cells of the data packets from being sent out through continuous slots.

2. A transmission apparatus for constant bit rate data cells according to claim 1, wherein said controller determines when a new group of data packets is transmitted and whether or not a data cell which is sent out through a slot immediately before to said asynchronous transfer mode network has been a head data cell of the data packet, starts the transmission of said new group of data packets at the next transmission cycle if the data cell sent out through a slot immediately before has been the head data cell, and starts the transmission of said new group of data packets to the asynchronous transfer mode network at the current transmission cycle if the data cell sent out through a slot immediately before has not been the head data cell.

3. A transmission apparatus for constant bit rate data cells, which is adapted to transmit data cells of data packets in sequence to an asynchronous transfer mode network, in matching with a transmission cycle, comprising:

a data buffer which holds a plurality of data packets, into which a stream of data to be transmitted is divided;

a control memory which stores control information regarding the stream of data to be transmitted; and

a controller which transmits said plurality of data packets for respective data cells of constant bit rates to said network based on said control information stored in said control memory,

wherein said controller determines when new control information is processed and whether or not a data cell sent out through a slot immediately before to said network has been a head data cell of the data packet, prevents the data cell, which is carried out at the current transmission cycle, from starting of the transmission based on said new control information, if the data cell sent out through a slot immediately before has been the head data cell, and starts the transmission of the data cell of a constant bit rate at the current transmission cycle based on said new control information, if the data cell sent out through a slot immediately before has not been the head data cell.

4. A transmission apparatus for constant bit rate data cells according to claim 3, wherein said control memory stores a shaper link list for linkage of control information that is being processed, and an additional link list for linkage of said new control information, and

wherein said controller processes pieces of control information linked with said shaper link list in sequence in matching with a transmission cycle, and then processes control information linked with said additional link list.

5. A transmission apparatus for constant bit rate data cells according to claim 4, wherein said controller links control information with said shaper link list, and deletes said control information from said additional link list when said control information linked with said

additional link list is processed.

6. A transmission apparatus for constant bit rate data cells according to claim 5, wherein said control information contains a transmitted data cell count indicating the number of transmitted data cells in the data packet, and

wherein said controller determines whether or not a data cell sent out through a slot immediately before to said network has been a head data cell of the data packet based on the transmitted data cell count of the control information processed immediately before.

7. A transmission apparatus for constant bit rate data cells according to claim 6, wherein said controller processes head control information linked with said additional link list after processing all pieces of control information linked with said shaper link list at respective transmission cycles.

8. A transmission apparatus for constant bit rate data cells according to claim 7, wherein said network is an asynchronous transfer mode network.

9. A transmission apparatus for constant bit rate data cells according to claim 8, wherein said control information respectively contains a PD address indicating a location of a packet descriptor on said data buffer , a reading address indicating an address of a data cell to be read and to be transmitted next in a packet, and linkage information indicating a linkage between preceding and succeeding pieces of control information.

10. A transmission method for constant bit rate data cells, which is adapted to transmit a group of data

packets in sequence for respective data cells of constant bit rates to an asynchronous transfer mode network in accordance with control information, comprising the steps of:

reading pieces of control information linked with a shaper link list in sequence through respective slots of a transmission cycle, and transmitting the data cells of constant bit rates in accordance with said control information;

after completion of the processing for all the pieces of control information in said shaper link list, linking control information linked with a head portion of an additional link list to a last of said shaper link list, and deleting the control information from said additional link list;

determining whether or not a data cell sent out through a slot immediately before is a head data cell of the data packet; and

if the data cell sent out through said slot immediately before is not the head data cell of the data packet, transmitting the data cell based on the control information added to said shaper link list.

11. A transmission method for constant bit rate data cells, which is adapted to transmit a group of data packets in sequence for respective data cells of constant bit rates to an asynchronous transfer mode network in accordance with control information, comprising the steps of:

reading control information from a shaper link list through each slot of a transmission cycle;

transmitting a data cell based on said read control information, and updating said control information;

after processing of last control information in said shaper link list, linking control information linked

with a head portion of an additional link list to a last of said shaper link list, and deleting the control information from the additional link list;

referring to control information processed through a slot immediately before, and determining whether or not the processing through the slot immediately before has been transmission of a head data cell of the data packet based on a transmitted data cell count;

if the processing through the slot immediately before has not been the transmission of the head data cell of the data packet, transmitting the data cell based on the control information linked with the last of said shaper link list, and updating the control information; and

if the processing through the slot immediately before has been the transmission of the head data cell of the data packet, preventing transmission of the data cell of the control information linked with the last of said shaper link list.